

**REMARKS**

**Status of Claims**

Claims 1-9, 11-12, and 14-21 are pending, with claims 1, 14, 15 and 20 being independent. Claim 20 was allowed.

Applicants note with appreciation the indication of allowable subject matter of claims 15-18 if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 14 and 15 have been amended to correct informalities in claim language and to more clearly define the present subject matter. Claims 14 and 15 have been rewritten in independent form. Accordingly claims 15-18 are now in condition for allowance. Care has been taken to avoid introducing new matter.

**Claim Rejection - 35 U.S.C. §103**

Claims 1-9, 11-12, 14, 19 and 21 were rejected under 35 U.S.C. §103(a) as being unpatentable over Hasegawa et al. (U.S. Publication No. 2005/0269584) further in view of Tsujimura et al. (U.S. Publication No. 2003/0168653) and Nido (U.S. Patent No. 5,793,054). This rejection is traversed for at least the following reasons.

Regarding claim 1, Applicants respectfully submit that it would not have been obvious to combine Hasegawa and Tsujimura with Nido because there is no motivation or suggestion to do so. In rejecting claim 1, the Examiner asserts that Nido discloses that a first n-type semiconductor layer (layer 3 of Nido) contains indium. Applicants respectfully submit that in Nido, the tensile strain is applied to the active layer by the substrate to improve efficiency of the light emitting diode (see, col. 10, lines 21-33 of Nido). As disclosed at col. 7, lines 43-44 of

Nido, the layer 3 including indium serves as the substrate for applying the tensile strain to an active layer. The composition and the structure of layer 3 is optimized for applying a desirable amount of strain with respect to the other layers.

On the other hand, in Hasegawa, the composition and structure of layer 13 (i.e., the alleged first layer) is optimized with respect to the other layers, which are different from Nido's layers. Accordingly, if, *arguendo*, the layer 13 of Hasegawa ( $\text{Al}_{0.07}\text{Ga}_{0.93}\text{N}$ ) was replaced with the layer 3 of Nido ( $\text{In}_{0.06}\text{Ga}_{0.04}\text{N}$ ), the replaced layer 3 ( $\text{In}_{0.06}\text{Ga}_{0.04}\text{N}$ ) would apply unnecessary strain to the active layer of Hasegawa, which might degrade the properties of Hasegawa's device. As such, no one of skill in the art would be motivated to replace the layer 13 of Hasegawa with layer 3 of Nido.

Accordingly, claim 1 and all claims dependent thereon are patentable over the cited references. Thus, it is requested that the Examiner withdraw the rejections of claims 1-9, 10-12, 19 and 21.

Regarding claim 14, Applicants respectfully submit that, at a minimum, none of the cited references discloses or suggests that "the third n-type semiconductor layer is an n-type contact layer." Although the Examiner asserts that item 14 of Hasegawa corresponds to the claimed contact layer, layer 14 has no contact electrode. It should be noted that the layer 14 of Hasegawa is an n-type light guide layer. As such, it is clear that claim 14 is patentable over the cited references.

Thus, Applicants respectfully request that the Examiner withdraw the rejection of claims 1-9, 11, 12, 14, 19 and 21 under 35 U.S.C. §103(a).

**Conclusion**

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication for which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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